WHAT IS CLAIMED IS:

1. A fusion protein comprising a fluorescent protein, said fusion protein having a half life of no more than about ten hours.

2. The fusion protein of claim 1, wherein said fluorescent protein is selected from the group consisting of EGFP, ECFP and EYFP.

3. The fusion protein of claim 2, wherein said fusion protein comprises a PEST sequence-containing portion of a C-terminus of murine ornithine decarboxylase (MODC) fused to said fluorescent protein.

4. The fusion protein of claim 3, wherein said PEST sequence-containing portion of said C-terminus of murine ornithine decarboxylase comprises an amino acid selected from the group consisting of $MODC_{376-461}$, $MODC_{376-456}$, $MODC_{422-461}$,

P426A/P427A, P438A, E428A/E430A/E431A, E444A, S440A, S445A, T436A, D433A/D434A and D448A.

5. The fusion protein of claim 3, wherein said protein has the sequence shown in SEQ ID No. 1.

6. An isolated DNA molecule encoding the fusion protein of claim 1.

7. The DNA of claim 6, wherein said DNA encodes a fusion protein wherein said fluorescent protein is selected from the group consisting of EGFP, ECFP and EYFP.

8. The DNA of claim 7, wherein said DNA encodes a fusion protein comprising a PEST sequence-containing portion of a C-terminus of murine ornithine decarboxylase (MODC) fused to the fluorescent protein.

9. The DNA of claim 8, wherein said PEST sequence-containing portion of a C-terminus of murine ornithine decarboxylase is selected from the group consisting of $MODC_{376-461}$, $MODC_{376-456}$, $MODC_{422-461}$, P426A/P427A, P438A, E428A/E430A/E431A, E444A, S440A, S445A, T436A, D433A/D434A and D448A.

10. The isolated DNA of claim 8, having the sequence shown in SEQ ID No. 2.

11. A vector capable of expressing the isolated DNA molecule of claim 6.

12. The vector of claim 11, wherein said vector comprises an inducible promoter.

13. A vector capable of expressing the isolated DNA molecule of claim 10.

14. The vector of claim 13, wherein said vector comprises an inducible promoter.

15. The vector of claim 14, wherein said promoter is tetracycline-inducible.

16. A method of producing a stable cell line that expresses a fluorescent protein comprising the step of transfecting cells with the vector of claim 11.

17. The stable cell line produced by the method of claim 16.

18. A method of assaying activation or deactivation of transcriptional or translational elements with a transient fluorescent reporter protein, comprising the steps of:

transfecting cells with an expression vector comprising a fluorescent protein fusion protein having a half life of no more than about ten hours, wherein the fusion protein is under the influence of the promoter, transcriptional or translational element; and

detecting the presence, absence or amount of fluorescence in said cells.

19. The method of claim 18, wherein the amount of fluorescence present in the cell is a measure of the fluorescent protein that is being expressed.

20. A method of assaying activation or deactivation of promoters or other transcriptional or translational elements with a transient fluorescent protein reporter protein, comprising the steps of:

transfecting cells with an expression vector comprising a fluorescent fusion protein having a half life of no more than about ten hours, wherein the fluorescent fusion protein is under an influence of said promoter, transcriptional or translational element;

treating said transfected cells with a compound of interest; and

detecting a change in fluorescence upon treatment of the cells with said compound of interest so as to assay the effect of said compound of interest on said activation or deactivation of said transcription or translation elements.

21. A method of studying cell lineage, comprising the steps of:

transfecting undifferentiated cells with a vector expressing the destabilized fusion protein of claim 1;

growing said undifferentiated cells under conditions in which the undifferentiated cells become differentiated cells; and

detecting an absence, presence or location of fluorescence in the differentiated cells.

22. A method of using a fusion protein of claim 1 in cell localization studies, comprising the steps of:

transfecting cells with an expression vector comprising a GFP fusion protein having a half life of no more than ten hours, wherein the fusion protein is linked to a putative cell localization element;

growing the cell; and

detecting a location of fluorescence in the cells.